

RESOURCES FOR "SSC-I PHYSICS" ZUEB EXAMINATIONS 2021



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PREFACE:

The ZUEB examination board acknowledges the serious problems encountered by the schools and colleges in smooth execution of the teaching and learning processes due to sudden and prolonged school closures during the covid-19 spread. The board also recognizes the health, psychological and financial issues encountered by students due to the spread of covid-19.

Considering all these problems and issues the ZUEB Board has developed these resources based on the condensed syllabus 2021 to facilitate students in learning the content through quality resource materials.

The schools and students could download these materials from <u>www.zueb.pk</u> to prepare their students for the high quality and standardized ZUEB examinations 2021.

The materials consist of examination syllabus with specific students learning outcomes per topic, Multiple Choice Questions (MCQs) to assess different thinking levels, Constructed Response Questions (CRQs) with possible answers, Extended Response Questions (ERQs) with possible answers and learning materials.

ACADEMIC UNIT ZUEB:

1: Multiple Choice Questions:

The Multiple-Choice Questions with a stem, correct answer and 3 distractors or plausible wrong answers format is designed to assess the content and thinking of students from; R (Remembering); U(Understanding) and A (Applying, Analyzing, Evaluating, Creating). The questions are also classified into three difficulty levels accordingly; D (DIFFICULT), M (MODERATE), E (EASY)

HOW TO ATTEMPT AN MCQ:

MCQ:

- EACH MCQ HAS FOUR OPTIONS, A, B, C AND D. SELECT ONE OPTION AS THE BEST ANSWER AND FILL IN THE CIRCLE OF THAT OPTION, FOLLOWING THE INSTRUCTIONS GIVEN BY THE INVIGILATOR.
- USE BLACK PEN/PENCIL TO FILL IN THE CIRCLE.

| Correct Way | Wrong Ways | | |
|-------------|------------|---|-----------|
| 1 | 1 | 2 | 3 |
| a | a | a | a |
| Ъ | b | b | b |
| C | \otimes | C | \oslash |
| d | d | d | d |

| S# | MCQ'S MATERIAL | KEY | CL | DL |
|-----------|--|------------|-------|----|
| 1 | <tbody<tr>A body is said to be in motion when itits position with respect to its surroundings.(A) change(B) does not change (C) A and B(D) none of them</tbody<tr> | ו A | U/K | М |
| 2 | The numerical value of g is m.s ⁻² . (A) 980 (B) 9.8 (C) 32 (D) 16 | В | U/A/K | Е |
| 3 | In S.I. units the value of g is (A) 9.8 m/s (B) 9.8 m/s ² (C) 32 ft /s ² (D) 980 m/s ² | В | U/A/K | Е |
| 4 | The velocity and acceleration of a body moving with a uniformspeed in a circle are(A) parallel(B) opposite(C) mutually perpendicular(D) none of them | C | U/K | М |

| 5 | If the velocity of a moving body decreases by equal amounts in equal intervals of time, however small they may be, the body is said to haveacceleration. (A) zero (B) uniform and positive (C) uniform and negative (D) none of them By dividing the displacement of a moving body by the time taken we obtain | C B | U/A/K | E |
|----|--|--------|-------|---|
| 0 | (A) average speed (B) average velocity (C) uniform velocity (D) acceleration | | U/A/K | E |
| 7 | Speed in a given direction is called (A) displacement (B) velocity (C) acceleration (D) momentum | В | υ/κ | Μ |
| 9 | If a moving body covers equal distances in equal intervals of time, however, small the interval may be, in a particular direction, then the velocity is called velocity. (A) uniform (B) average (C) instantaneous (D) variable | A | U/A/K | Е |
| 10 | The distance covered by a moving object in one second is called (A) speed (B) velocity (C) acceleration (D) momentum | A | U/A/K | Е |
| 11 | Motion cannot be produced in a body without (A) agent (B) force (C) torque (D) both A and B | A | U/К | М |
| 12 | No moving object can be stopped without applying (A) agent (B) force (C) torque (D) both A and B | В | U/A/K | Е |
| 13 | The property of the matter by virtue of which it resists attempt to change its state of rest or of uniform motion is called (A) inertia (B) mass (C) momentum (D) none of them | A | U/A/K | Е |
| 14 | When an external force acts upon a body then it produces an in the body in its own direction. (A) speed (B) velocity (C) acceleration (D) none of them | C | U/K | М |
| 15 | The acceleration produced in a body under the influence of an external force is proportional to the magnitude of the force. | В | U/A/K | Е |

| All inversely B Image: Constraint of the second secon | | 103 | | | 1 |
|--|----|--|---|-------|-----|
| (B) or cetty (C) none of them B If (B) mass U/A/K E (D) fluid (D) fluid U/A/K E The force with which earth attracts a body towards its center is called of the body. B U/A/K E (A) inertia (B) mass U/A/K E U/A/K E (A) gravity of the body. U/A U/A/K K M (A) gravity of the body. U/A/K K M (B) weight U/A/K (U/A/K M M (C) not equal, opposite. in direction. A U/A/K E (B) opposite, equal (C) not equal, opposite U/A/K E E (D) none of them U/A/K E U/A/K E (D) none of them U/A/K E U/A/K E (D) none of them U/A/K E E U/A/K K (D) none of them U/A/K E E U/A/K K (D) none of them U/A/K E E U/A/K K E | | (A) inversely | | | |
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| 22 they(A) make the surface plane (B) make the surface greasy (C) convert sliding friction into rolling friction (D) have no friction of their own U/A/K E 23 If the force acting on a body is doubled, then the acceleration produced is (A) 1/2 (B) 1/4 (C) double (D) quadrupled C U/A/K M | | Friction can be reduced by using ball bearings because | С | | |
| 22 (A) make the surface plane U/A/K E 23 (B) make the surface greasy U/A/K E 23 If the force acting on a body is doubled, then the acceleration produced is C U/K M 23 (A) 1/2 U/K M | | they | | | |
| 22 (B) make the surface greasy U/A/K E (C) convert sliding friction into rolling friction U/A/K E (D) have no friction of their own If the force acting on a body is doubled, then the acceleration produced is C 23 (A) 1/2 U/K M (B) 1/4 (C) double U/K M | | (A) make the surface plane | | | |
| (C) convert sliding friction into rolling friction If the force no friction of their own If the force acting on a body is doubled, then the acceleration C 23 If the force acting on a body is doubled, then the acceleration produced is C U/K M 23 (A) 1/2 U/K U/K M | 22 | (B) make the surface greasy | | U/A/K | Ε |
| (D) have no friction of their own If the force acting on a body is doubled, then the acceleration produced is C 23 If the force acting on a body is doubled, then the acceleration produced is C U/K M 23 (A) 1/2 (B) 1/4 (C) double (D) guadrupled U/K M M | | (C) convert sliding friction into rolling friction | | | |
| 23 If the force acting on a body is doubled, then the acceleration produced is C (A) 1/2 U/K U/K (B) 1/4 U/K M | | (D) have no friction of their own | | | |
| 23 If the force acting on a body is doubled, then the acceleration produced is (A) 1/2 U/K M (B) 1/4 (C) double (D) guadrupled | | | | | |
| 23 produced is (A) 1/2 U/K M (B) 1/4 (C) double (D) guadrupled | | If the force acting on a body is doubled, then the acceleration | C | | |
| 23 (A) 1/2 (B) 1/4 (C) double (D) guadrupled | | produced is | | | |
| <pre>(B) 1/4 (C) double (D) guadrupled</pre> | 22 | (A) 1/2 | | 11/12 | м |
| (C) double (D) guadrupled | 43 | (B) 1/4 | | U/K | IVI |
| (D) guadrupled | | (C) double | | | |
| | | (D) quadrupled | | | |

| 24 | When a horse pulls a wagon, the force that causes the horse to move forward is the force. (A) he exerts on the wagon (B) the ground exerts on him (C) the wagon exerts on the ground | В | U/A/K | Е |
|----|---|---|-------|---|
| 25 | Which is the best approximation of the weight of an object of mass 800 gram?(A) 8N(B) 12 N(C) 9 N(D) 15 N | A | U/A/K | E |
| 26 | The value of gravitational constant is determined by A: Einstein B: Newton C: Cavendish D: None of them | С | U/K | М |
| 27 | Tje acceleration due to gravity varies inversely with A: Acceleration B: Velocity C: Attitude D: Mass | С | U/A/K | Е |
| 28 | The gravitational force b/w two bodies depends upon the product of thier masses and A: Distance b/w them B: Shape of bodies C: Medium b/w them D: None of them | Α | U/A/K | Е |
| 29 | The work will be positive ,of the angle between force and displacement is A: 90 B: 180 C: 60 D: 0 | D | U/K | М |
| 31 | 1Kw = watts A: 10 B: 100 C: 1000 D: 0.001 | С | U/A/K | Е |

| | | | | <u> </u> |
|----|--|---|-------|----------|
| | Whenever work is done on an object, it gains | | | |
| | A: Force | | | |
| 32 | B: Power | D | U/A/K | Ε |
| | C: Sweat | | | |
| | D: Energy | | | |
| | The SI unit of enery is | | | |
| | A: Joule | | | |
| 33 | B: Metre | Α | U/K | Μ |
| | C: Newton | | | |
| | D: Time | | | |
| | Power is the product of and | | | |
| | A: Force | | | |
| 34 | B: Velocity | C | U/A/K | Ε |
| | C: Both | | | |
| | D: None of them | | | |
| | The work will be positive if the angle between force and | | | |
| | displacement is | | | |
| 25 | A: 90 Degree | C | | Б |
| 33 | B: 180 Degree | C | U/A/K | E |
| | C: 0 Degree | | | |
| | D: 30 Degree | | | |
| | The energy stored in a stretched or compressed elastic | | | |
| | material such as spring is called | | | |
| 26 | | | | 2.6 |
| 36 | B: Elastic potential energy | В | U/K | M |
| | C: Kinetic energy | | | |
| | D: All of them | | | |
| | When a body is capable of doing work by virtue of its | | | |
| | motion, the energy is called | | | |
| | A: Gravitational potential energy | | | |
| 37 | B: Elastic potential energy | C | U/A/K | Ε |
| | C: Kinetic energy | | | |
| | D: None of these | | | |
| | | | | |
| | Elasticity of a substance depends on its | | | |
| | A: Temperature | | | |
| 38 | B: Size | С | U/A/K | Е |
| | C: Nature | | | |
| | D: Both (b) & (c) | | | |
| | | | | |

| r | | Γ | 1 | [|
|----|---|---|-------|---|
| 39 | According to "Tension is proportional to extension". A: Pascal's Law B: Archimedes Principle | С | U/K | М |
| | C: Hook's Law D: None of these | | | |
| 40 | Formula of a pressure is A: F = p/a B: P = F/A C: F=MA D: P = f/m | В | U/A/K | E |
| | In SI system unit of temperature is | | | |
| 41 | A: Joule B: Kelvin C: Meter D: Kilometer | В | U/A/K | Е |
| | The degree of hotness or coldness of a body is called | | | |
| 42 | A: Heat B: Temperature C: Power D: Energy | Α | U/K | Μ |
| | In SI system the unit of heat is | | | |
| 43 | A: Newton B: Newton-meter C: Joule D: Pascal | С | U/A/K | E |
| 44 | All the universe follows the laws of: A) Nature B) Physics C) Newton D) Galileo | В | U/A/K | E |
| 45 | The Least count of Micrometer screw gauge is: A) 1 mm B) 0.1 mm C) 0.01mm D) 0.001 mm | D | U/K | М |
| 46 | The wheels of a moving car and the blades of a moving electric fan are the examples of : A) Linear motion B)Rotatory motion C) Translatory motion D) Vibratory motion | В | U/A/K | E |

| 48 | It is scalar A) Torque B) Distance C) Acceleration D) Momentum | В | U/A/K | E |
|----|---|---|-------|---|
| 49 | 1 radian = A) 57.3° B) 1° C) 5.73° D) 0.573 15. | Α | U/K | М |
| 50 | The second condition of equilibrium states that : A) Σ P=0 B) Σ τ =0 C) Σ F=0 D) both Σ P & Σ F =0 | В | U/A/K | Е |
| 51 | Which is the best approximation of the weight of an object of mass 800 gram? A)88N B) 80N C) 8N D) 0.8N | С | U/A/K | E |
| 52 | An object appears lighter in water because one of the properties of matter: A) Pressure B) Buoyancy C) Surface Tension D) Viscosity | С | U/K | М |
| 53 | A 25 N Force acts on X-axis, what is value of Y-component A) 25 N B)5 N C) 0 N D)-25 N | С | U/A/K | E |
| 54 | The value of radius of earth is: A) 6.38×10-6 m B) 6.38×106 m C) 63.8×10-6 m D)63.8×106 m | В | U/A/K | E |
| 55 | If F=100N and v=2.5 m/s , then Power will be : A)25 watt B) 250 watt C)2.5 Kilowatt D) 250 Kilowatt | В | U/K | М |
| 56 | A body is said to be in motion if it changes its position with respect to its : A) Time B) Speed C) Velocity D) Surrounding | D | U/A/K | E |
| 57 | The S.I unit of force is : A) Kilogram B) watt C) Newton | С | U/A/K | E |
| 58 | 5. If F=4N, a=2m/s2 , then " m" is A) 2 Kg B) 4 Kg C) 6 Kg D) 8 Kg | D | U/K | М |
| 59 | Boiling point of water at S.T.P is A) 0 K B) 273 K C) 100 K D) 373 K | В | U/A/K | E |

